

PATENT

Attorney Docket No. 186115/US3/DJB/VEJ
Application No. 10/061,416***In the Claims:***

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-15. (Canceled)

16. (Currently amended) The [[fluid delivery]] system of claim [[13]] 23 configured for integration with a light detection instrument in a single housing.

17-22. (Canceled)

23. (Original) A system for delivering fluid to an examination site in a light detection instrument, comprising:

a head assembly including a fluid transfer device;
a drive mechanism connected to the head assembly for moving the head assembly along a vertical sample delivery axis;

a tip loading station positioned along the sample delivery axis where disposable tips can be temporarily attached and detached to and from the fluid transfer device;

a tip carrier assembly that is moveable in a direction perpendicular to the sample delivery axis to and from the tip loading station; and

an examination site positioned along the sample delivery axis and vertically displaced from the tip loading station, wherein the fluid transfer device can be moved along the sample delivery axis to pick up tips at the tip loading station and to deliver fluid to the examination site.

24. (Original) The system of claim 23, wherein the examination site is one of plural examination sites located at an analysis station, each examination site having a vertical sample delivery axis along which the fluid transfer device is capable of delivering fluid.

25. (Original) The system of claim 23, wherein the fluid transfer device has a tip removal mechanism.

PATENT

Attorney Docket No. 186115/US/3/DJB/VEJ
Application No. 10/061,416

26. (Original) A system for delivering fluid to an examination site in a light detection instrument, comprising:

a head assembly including a pipette device;

a drive mechanism connected to the head assembly for moving the head assembly along a vertical sample delivery axis;

a first pipetting station positioned along the sample delivery axis where the pipette device can dispense and aspirate fluid to and from a container;

a fluid carrier assembly that is moveable in a direction perpendicular to the sample delivery axis to and from the first pipetting station; and

an examination site positioned along the sample delivery axis and vertically displaced from the first pipetting station, wherein the pipette device can be moved along the sample delivery axis to pick up fluid at the first pipetting station and to deliver fluid to the examination site.

27. (Original) The system of claim 26, wherein the examination site is one of plural examination sites located at an analysis station, each examination site having a vertical sample delivery axis along which the pipette device is capable of delivering fluid.

28. (Original) The system of claim 27, wherein the analysis station includes top and bottom optics heads, each optics head being moveable laterally for detecting light from the plural examination sites, the top optics head also being moveable out of the way of the pipette device when fluid is being delivered.

29. (Original) The system of claim 26 further comprising a pipette loading station along the sample delivery axis where pipette tips can be attached or detached to or from the pipette device.

30. (Original) The system of claim 26 further comprising a first processor coupled to the head assembly, wherein the first processor controls the preparation of each of a plurality of

PATENT

Attorney Docket No. 186115/US3/DJB/VEJ
Application No. 10/061,416

samples and determines at least one time tag corresponding to a sample preparation step for each of the plurality of samples.

31-40. (Cancelled)

41. (Previously presented) The system of claim 23, wherein the fluid transfer device includes an array of fluid delivery channels.

42. (Previously presented) The system of claim 26, wherein the pipette device includes an array of pipette channels.

43. (Previously presented) The system of claim 26, wherein the pipette device includes a tip removal mechanism.

44. (Previously presented) The system of claim 27, wherein the analysis station includes an optic head to detect light from the plural examination sites.

45. (Previously presented) The system of claim 44, wherein the optic head is above the examination sites and is moveable out of the way of the pipette device when fluid is being delivered.

46. (Previously presented) The system of claim 44, wherein the optic head is below the examination site.

47. (Previously presented) The system of claim 29 further comprising a pipette tip carrier assembly that is moveable in a direction perpendicular to the sample delivery axis to and from the pipette loading station.

PATENT

Attorney Docket No. 186115/US/3/DJB/VEJ
Application No. 10/061,416

48. (Previously presented) The system of claim 29 further comprising a drive mechanism that causes the pipette device to exert a force on pipette tips located at the pipette loading station.

49. (Previously presented) The system of claim 48, wherein the amount of force exerted by the pipette device is variable depending on the number of pipette tips located at the pipette loading station.

50. (Previously presented) The system of claim 29 wherein the pipette loading station is above the first pipetting station and examination site along the sample delivery axis.

51. (Previously presented) The system of claim 23 wherein the fluid transfer device can aspirate fluid from the examination site.

52. (New) The system of claim 23 wherein the examination site is positioned along the sample delivery axis below the tip loading station.

53. (New) The system of claim 26 wherein the examination site is positioned along the sample delivery axis below the first pipetting station.

54. (New) The system of claim 23 further comprising a material exchange station, wherein the tip loading and material exchange stations are positioned so that as the head assembly moves down the sample delivery axis it first encounters the tip loading station, then the material exchange station that transfers fluid, and then the examination site.

55. (New) The system of claim 29, wherein the pipette loading station includes a tip carrier assembly that is moveable in a direction perpendicular to the sample delivery axis, and wherein the fluid carrier assembly and the pipette loading station move in parallel directions relative to each other.